DSM Incentive Returns Proposal – Benefit/Cost Ratio Approach

Overview:

An incentive return approach can be developed that actually gives the utility a reward for exceeding Commission DSM goals on a performance basis. These incentives are symmetrical and provide both rewards for exceptional performance and penalties for inferior performance.

The benefit/cost (B/C) ratio approach would scale rewards and penalties based upon cost-effectiveness, rather than the total volume (or dollar) of savings. The higher the ratio, indicating the greater the benefit relative to every dollar spent, the greater the opportunity for the utility to earn an incentive. Lower ratios would result in penalties.

Data and Approach:

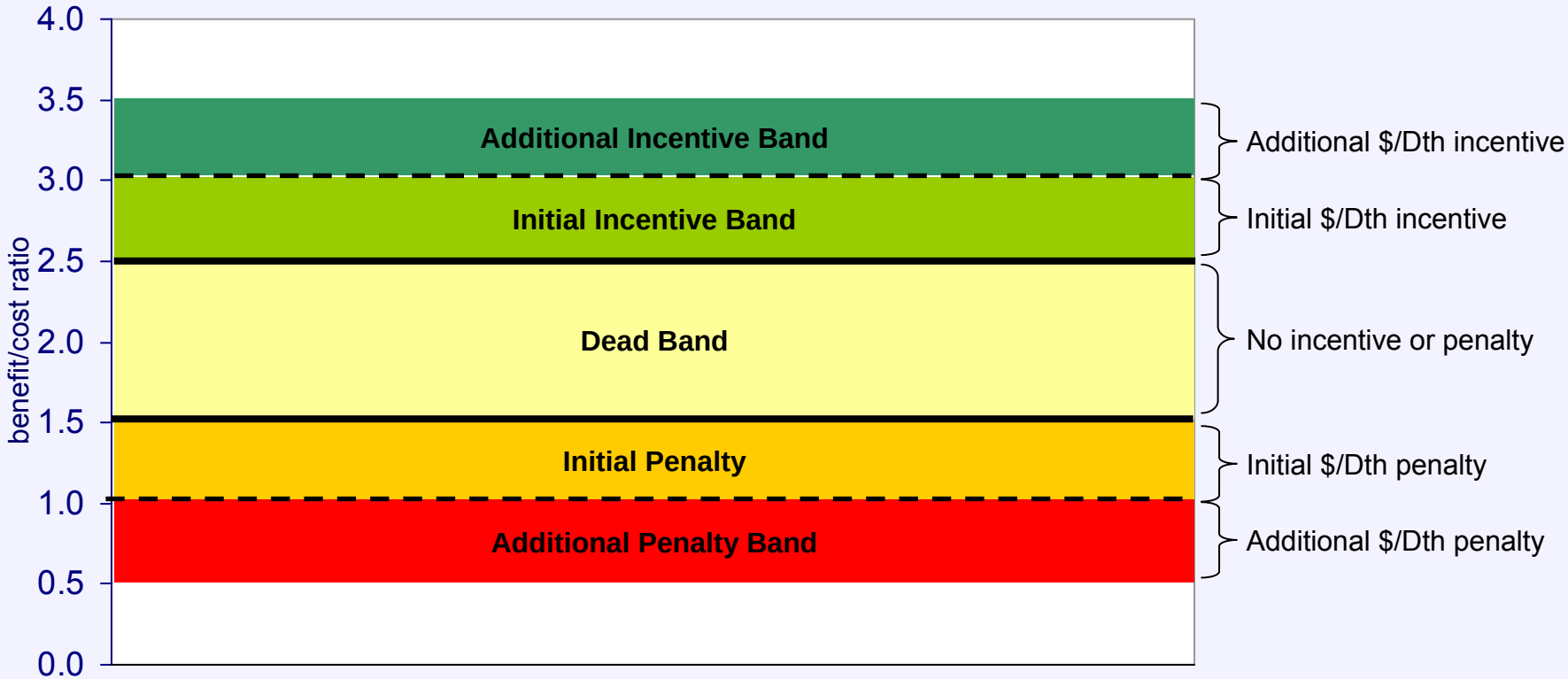
The data used in this approach would be taken from information supporting the portfolio of programs the Company proposes over the 3 year pilot period. Estimates of costs and savings would be used to develop the baseline B/C ratio for incentive purposes. Comparisons to other states' best practices could also be utilized in establishing the baseline B/C ratio.

This proposal envisions a dead-band around the baseline B/C ratio. Actual performance that falls within the baseline would not be subject to any penalties or rewards.

Performance that exceeds the dead-band would result in a fixed dollar per decatherm ($/Dth) reward to the Company. The reward levels would be established from the benefits estimated in the Company's proposed 3 year portfolio of DSM programs.

Additional bounds could be established that give higher rewards as higher levels of DSM delivery effectiveness are attained.

DSM Incentive Returns Proposal – Benefit/Cost Ratio Approach, Illustrative Example



Note: For illustrative purposes only, actual amounts would have to be determined by the parties after DSM programs are submitted by the Company.

DSM Incentive Returns Proposal – Total Savings Approach

Overview:

An incentive return approach can be developed that actually gives the utility a reward for exceeding Commission DSM goals in absolute value. These incentives are symmetrical and provide both rewards for exceptional performance and penalties for inferior performance.

This proposed approach would scale rewards and penalties based upon total volume of savings. The higher the total achieved savings the greater the opportunity for the utility to earn an incentive. Lower achieved savings levels would result in penalties.

Data and Approach:

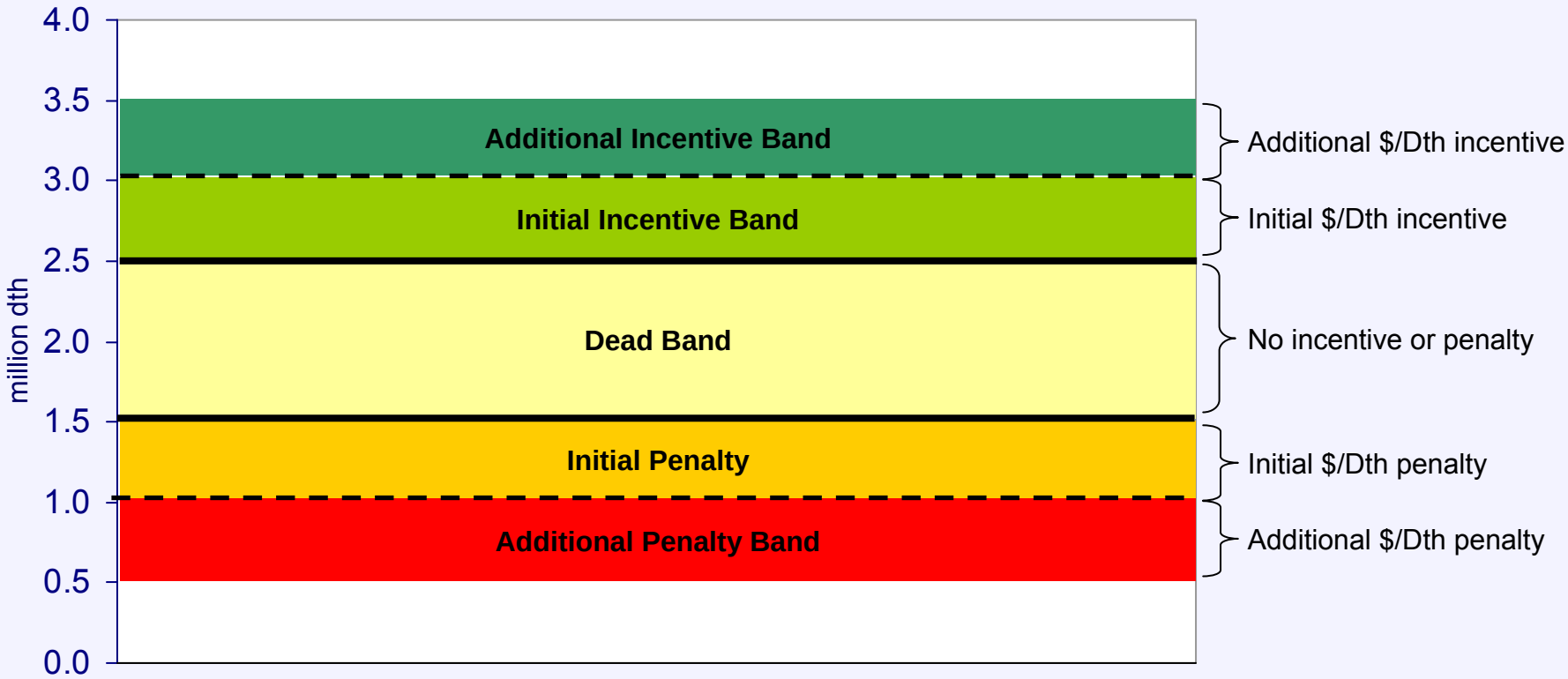
The data used in this approach would be taken from information supporting the portfolio of programs the Company proposes over the 3 year pilot period. Estimates of savings would be used to develop the baseline savings levels for incentive purposes. Comparisons to other states' best practices could also be utilized in establishing the baseline level.

This proposal envisions a dead-band around the baseline savings level. Actual performance that falls within the baseline would not be subject to any penalties or rewards.

Performance that exceeds the dead-band would result in a fixed dollar per decatherm ($/Dth) reward to the Company. The reward levels would be established from the benefits estimated in the Company's proposed 3 year portfolio of DSM programs.

Additional bounds could be established that gives higher rewards as higher levels of DSM savings are attained.

DSM Incentive Returns Proposal – Total Savings Approach, Illustrative Example



Note: For illustrative purposes only, actual amounts would have to be determined by the parties after DSM programs are submitted by the Company.

Statistical Re-coupling Approach

Overview:

A statistical re-coupling approach is a modification of a full revenue decoupling approach like the CET. The only difference is that the "true-up" amounts are adjusted to "back-out" the impacts associated with exogenous impacts like changes in the economy, prices and other factors.

Making these adjustments results in maintaining the traditional risk relationship between a utility and its ratepayers.

Thus, increased sales due to an expanding economy, or decreases in natural gas prices would be credited to the utility. Like traditional methods, the approach is also symmetrical meaning that decreases in economic activity, or increases in natural gas commodity prices, would result in decreases in the true-up amount.

Data and Approach:

A statistical re-coupling approach would use estimates of the income and price elasticity of demand to adjust the proposed average revenue balances. Income and price elasticities are estimated on a regular basis, through the load forecasting process, that is part of the Company's Integrated Resource Plan ("IRP"). This proposal would adopt the Company's current elasticity estimates and forecasted decrease in use per customer.

The income elasticity of demand is 0.05 and the price elasticity of demand is -0.06 on a use per customer basis.

Average use per customer would also be adjusted for the 2.7 Dth/customer reduction anticipated to occur from customer-initiated efficiency.

Statistical Re-coupling Approach

Example:

Allowed Amounts	
Revenues	$ 150,000,000
Usage	68,400,000
Customers	600,000
Revenue per customer	$ 250.00
Use per customer	114.00
Actual Amounts	
Revenues	$ 145,500,000
Usage	66,348,000
Customers	600,000
Revenue per customer	$ 242.50
Use per customer	110.58

Unadjusted True-Up		
Shortfall, Total Revenue	$	(4,500,000)
Shortfall, Revenue per Customer	$	(7.50)
Adjustments (Use per Customer)		
Price Elasticity Adjustment		-0.547
Income Elasticity Adjustment		0.143
Trend Adjustment		-2.700
Adjusted Use Per Customer		107.48
Adjustments (Revenues)		
Price Elasticity Adjustment	$	(720,000)
Income Elasticity Adjustment	$	187,500
Trend Adjustment	$	(3,552,632)
Total Adjustment	$	(4,085,132)
Total Adjustment per Customer	$	(6.81)
Net Decoupling Adjustment (Total)	$	(414,868)
Net Decoupling Adjustment (per Customer)	$	(0.69)

Note: This example assumes an annual price increase of 8 percent and an increase in personal income of 2.5 percent.

Impact of Sales on Utility Earnings

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.4

$$(1)\quad E* = R* - FC - VC$$

$$(2)\quad \Delta R\left(\Delta Q \times P\right) - \Delta VC = \Delta E$$

$$(3)\quad \left(R/E\right)\times\left(\left[\Delta R - \Delta VC\right]/R\right) = \Delta E/E = \Delta ROE/ROE*$$

Where:
E = earnings to common equity shareholders;
R = revenues;
FC = fixed costs (exclusive of equity returns)
VC = variable costs
ΔQ = the change in the quantity of sales relative to the test-year level,
P = the delivered price of gas;
ROE = rate of return on equity;
* = targeted or authorized levels for the specified parameters

Equation (1) assumes that common equity shareholders hold residual claims to a utility's earnings.

Equation (2) says that changes in the earnings to common equity shareholders equal the difference between changes in revenue and variable costs (i.e., the change in net revenues).

Equation (3) relates the proportional changes in earnings and the rate of return on equity to the change in net revenues and the ratio of revenues to earnings to common equity shareholders.

Source: NRRI

Impact of Sales on Utility Earnings – Adjustment

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.5

Changes in total usage can be decomposed between:

Usage attributable to a change in use per customer (existing customers)

Usage attributable to growth in new customers

$$\Delta Q_t = \left(\frac{Q_t}{C_t} - \frac{Q_{t-1}}{C_{t-1}} \right) \times C_{t-1} + \left(\frac{Q_t}{C_t} \right) \times C_t - C_{t-1}$$

Where:
C = customers
C_{t-1} = prior period customers
C_t = current period customers
Q_t/C_t = current period use per customer
Q_{t-1}/C_{t-1} = prior period use per customer

Estimated Impacts on Usage – Changes in Use per Customer and Changes in Customer Growth

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.6

	Average Number of Customers GS1	GS1 Usage per Customer (Dth/Cust)	Temperature Adjusted GS1 Usage (Dth)	Change in Use		Net Change (Dth)
				Average Use Existing Customers (Dth)	Number of New Customers (Dth)	
2001	693,316	118.97	82,483,943			
2002	711,636	115.84	82,436,911	(2,169,247)	2,122,214	(47,033)
2003	730,777	118.90	86,888,508	2,175,756	2,275,842	4,451,598
2004	753,953	114.10	86,027,940	(3,505,008)	2,644,440	(860,568)
2005	785,746	112.88	88,692,051	(924,563)	3,588,674	2,664,111
					Net Period Change	6,208,108
					Total Decrease	(907,601)
					Total Increase	7,115,709
					Net Period Change	6,208,108
					Average Period Change	1,552,027

Estimated Impacts on Revenue – Changes in Use per Customer and Changes in Customer Growth

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.7

	Average Number of Customers GS1	GS1 Usage per Customer (Dth/Cust)	Temperature Adjusted GS1 Usage (Dth)	Revenue Impact		
				Use per Customer	Customers	Total
				($)		
2001	693,316	118.97	82,483,943			
2002	711,636	115.84	82,436,911	$ (2,789,498)	$ 4,881,786	$ 2,092,288
2003	730,777	118.90	86,888,508	$ 12,357,411	$ 5,432,940	$ 17,790,351
2004	753,953	114.10	86,027,940	$ (2,071,375)	$ 6,512,534	$ 4,441,159
2005	785,746	112.88	88,692,051	$ (4,664,219)	$ 8,737,257	$ 4,073,039

Forecast – Estimated Potential Usage Trends

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.8

	Average Number of Customers	Usage per Customer (Dth/Cust)	Total Usage (Dth)	Change in Use: Average Use Existing Customers (Dth)	Change in Use: Number of New Customers (Dth)	Net Change (Dth)
2001	693,316	118.97	82,483,943			
2002	711,636	115.84	82,436,911	(2,169,247)	2,122,214	(47,033)
2003	730,777	118.90	86,888,508	2,175,756	2,275,842	4,451,598
2004	753,953	114.10	86,027,940	(3,505,008)	2,644,440	(860,568)
2005	786,017	112.88	88,722,641	(924,563)	3,619,264	2,694,700
Forecast:						
2006	811,017	110.18	89,354,801	(2,122,246)	2,754,406	632,160
2007	836,017	107.48	89,851,961	(2,189,746)	2,686,906	497,160
2008	858,017	104.78	89,899,792	(2,257,246)	2,305,077	47,831
2009	880,017	102.08	89,828,823	(2,316,646)	2,245,677	(70,969)
2010	902,017	99.38	89,639,055	(2,376,046)	2,186,277	(189,769)

Summary Financial Impact of Changes in Use per Customer and Customers, 2001-2005

	2001	2002	2003	2004	2005
Return on Equity					
Allowed ROE	11.00%	11.00%	11.20%	11.20%	11.20%
ROE Impact of Change in Use per Customer	0.00%	-0.59%	2.55%	-0.41%	-0.89%
ROE Impact Change in Customers	0.00%	1.03%	1.10%	1.18%	1.53%
ROE Impact Change in Expenses Rate Base and Capital Elements	**-0.54%**	**-2.38%**	**-3.76%**	**-1.92%**	**-1.17%**
Actual Achieved ROE	10.46%	9.06%	11.09%	10.05%	10.68%

Financial Impact of Change in Use per Customer, 2001-2005

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.9

Description	Utah Jurisdiction DNG Related 2001	2002	2003	2004	2005
Utility Operating DNG Revenue					
System Distribution Non-Gas Revenue	$ 200,696,764	$ 204,279,049	$ 218,434,068	$ 224,782,962	$ 228,246,882
General Related Other Revenue	11,123,598	11,443,447	5,130,380	5,177,571	6,535,759
	$ 211,820,362	$ 215,722,496	$ 223,564,448	$ 229,960,533	$ 234,782,641
Revenue Impact Declining Usage	-	(2,789,498)	12,357,411	(2,071,375)	(4,664,219)
Utility Operating Expenses					
Gas Purchase Expenses					
Utah Gathering & CO2	$ 12,006,619	$ 12,622,788	$ 8,298,154	$ 8,977,154	$ 8,460,107
Total Gathering & CO2	$ 12,006,619	$ 12,622,788	$ 8,298,154	$ 8,977,154	$ 8,460,107
Operation and Maintenance Expenses					
Production	$ (1,214,912)	$ (745,152)	$ (1,010,739)	$ (1,203,294)	$ (1,352,503)
Distribution	30,365,590	37,720,970	39,644,134	36,869,734	40,254,743
Customer Accounts	14,255,577	15,232,585	26,204,678	23,751,948	22,384,076
Customer Service & Information	2,013,500	1,860,122	2,445,531	2,443,979	2,288,424
Administrative & General (1)	48,294,087	38,236,699	26,170,801	35,666,695	33,126,824
Total O&M Expense	$ 93,713,842	$ 92,305,224	$ 93,454,405	$ 97,529,062	$ 96,701,563
Other Operating Expenses					
Depreciation, Depletion, Amortization	$ 34,548,652	$ 38,409,553	$ 38,687,066	$ 41,599,371	$ 44,205,272
Taxes Other Than Income Taxes	8,895,086	8,983,426	9,409,773	9,417,462	10,667,038
Income Taxes	17,089,113	14,913,704	24,565,519	19,229,657	19,623,189
South Georgia Amortization	1,407,363	1,431,437	1,435,745	-	-
Section 29 Tax Credits	(2,650,483)	-	224	-	-
Total Other Operating Expenses	$ 59,289,732	$ 63,738,121	$ 74,098,327	$ 70,246,491	$ 74,495,499
Total Utility Operating Expenses	$ 165,010,193	$ 168,666,133	$ 175,850,886	$ 176,752,707	$ 179,657,169
NET OPERATING INCOME	$ 46,810,169	$ 44,266,864	$ 60,070,973	$ 51,136,452	$ 50,461,253
TOTAL RATE BASE	$ 505,674,144	$ 539,520,097	$ 549,428,512	$ 600,068,706	$ 595,177,075
Adjusted Return on Rate Base	9.26%	8.20%	10.93%	8.52%	8.48%
Adjusted Return on Equity	10.46%	8.47%	13.64%	9.64%	9.79%
Actual Return on Rate Base	9.26%	8.52%	9.55%	8.73%	8.96%
Actual Return on Equity	10.46%	9.06%	11.09%	10.05%	10.68%
Incremental Impact Return on Rate Base	0.00%	-0.32%	1.38%	-0.21%	-0.48%
Incremental Impact Return on Equity	0.00%	-0.59%	2.55%	-0.41%	-0.89%

Financial Impact of Change in Customers, 2001-2005

Description	Utah Jurisdiction DNG Related 2001	2002	2003	2004	2005
Utility Operating DNG Revenue					
System Distribution Non-Gas Revenue	$ 200,696,764	$ 204,279,049	$ 218,434,068	$ 224,782,962	$ 228,246,882
General Related Other Revenue	11,123,598	11,443,447	5,130,380	5,177,571	6,535,759
	$ 211,820,362	$ 215,722,496	$ 223,564,448	$ 229,960,533	$ 234,782,641
Revenue Impact Customer Growth	-	4,881,786	5,432,940	6,512,534	8,737,257
Utility Operating Expenses					
Gas Purchase Expenses					
Utah Gathering & CO2	$ 12,006,619	$ 12,622,788	$ 8,298,154	$ 8,977,154	$ 8,460,107
Total Gathering & CO2	$ 12,006,619	$ 12,622,788	$ 8,298,154	$ 8,977,154	$ 8,460,107
Operation and Maintenance Expenses					
Production	$ (1,214,912)	$ (745,152)	$ (1,010,739)	$ (1,203,294)	$ (1,352,503)
Distribution	30,365,590	37,720,970	39,644,134	36,869,734	40,254,743
Customer Accounts	14,255,577	15,232,585	26,204,678	23,751,948	22,384,076
Customer Service & Information	2,013,500	1,860,122	2,445,531	2,443,979	2,288,424
Administrative & General	48,294,087	38,318,782	26,125,792	35,726,783	33,232,695
Total O&M Expense	$ 93,713,842	$ 92,387,307	$ 93,409,396	$ 97,589,149	$ 96,807,434
Other Operating Expenses					
Depreciation, Depletion, Amortization	$ 34,548,652	$ 38,409,553	$ 38,687,066	$ 41,599,371	$ 44,205,272
Taxes Other Than Income Taxes	8,895,086	8,983,426	9,409,773	9,417,462	10,667,038
Income Taxes	17,089,113	17,801,001	21,947,629	22,473,287	24,682,658
South Georgia Amortization	1,407,363	1,431,437	1,435,745	-	-
Section 29 Tax Credits	(2,650,483)	-	224	-	-
Total Other Operating Expenses	$ 59,289,732	$ 66,625,417	$ 71,480,438	$ 73,490,120	$ 79,554,969
Total Utility Operating Expenses	$ 165,010,193	$ 171,635,513	$ 173,187,987	$ 180,056,424	$ 184,822,510
NET OPERATING INCOME	$ 46,810,169	$ 48,968,770	$ 55,809,401	$ 56,416,644	$ 58,697,388
TOTAL RATE BASE	$ 505,674,144	$ 539,520,097	$ 549,428,512	$ 600,068,706	$ 595,177,075
Adjusted Return on Rate Base	9.26%	9.08%	10.16%	9.40%	9.86%
Adjusted Return on Equity	10.46%	10.09%	12.19%	11.22%	12.21%
Actual Return on Rate Base	9.26%	8.52%	9.55%	8.73%	8.96%
Actual Return on Equity	10.46%	9.06%	11.09%	10.05%	10.68%
Incremental Impact Return on Rate Base	0.00%	0.55%	0.61%	0.67%	0.90%
Incremental Impact Return on Equity	0.00%	1.03%	1.10%	1.18%	1.53%
Allowed Return on Equity	11.00%	11.00%	11.20%	11.20%	11.20%

Questar Average and Incremental Investment Trends

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.10

Description	Utah Jurisdiction DNG Related 2001	2002	2003	2004	2005
Rate Base	$ 505,674,144	$ 539,520,097	$ 549,428,512	$ 600,068,706	$ 595,177,075
Change in Rate Base		$ 33,845,953	$ 9,908,416	$ 50,640,194	$ (4,891,631)
Average Customers	694,363	712,651	731,752	754,960	786,740
Change in Customers		18,288	19,101	23,208	31,780
Incremental Rate Base Cost Per Customer		$ 1,851	$ 519	$ 2,182	$ (154)
Average Rate Base Cost per Customer	$ 728	$ 757	$ 751	$ 795	$ 757
Net Utility Plant in Service	$ 580,037,119	$ 620,793,377	$ 650,036,512	$ 705,080,214	$ 719,756,346
Change in Net Utility Plant in Service		40,756,258	29,243,135	55,043,702	14,676,132
Average Customers	694,363	712,651	731,752	754,960	786,740
Change in Customers		18,288	19,101	23,208	31,780
Incremental Net Utility Plant Cost Per Customer		**$ 2,229**	**$ 1,531**	**$ 2,372**	**$ 462**
Average Net Utility Plant Cost per Customer	$ 835	$ 871	$ 888	$ 934	$ 915

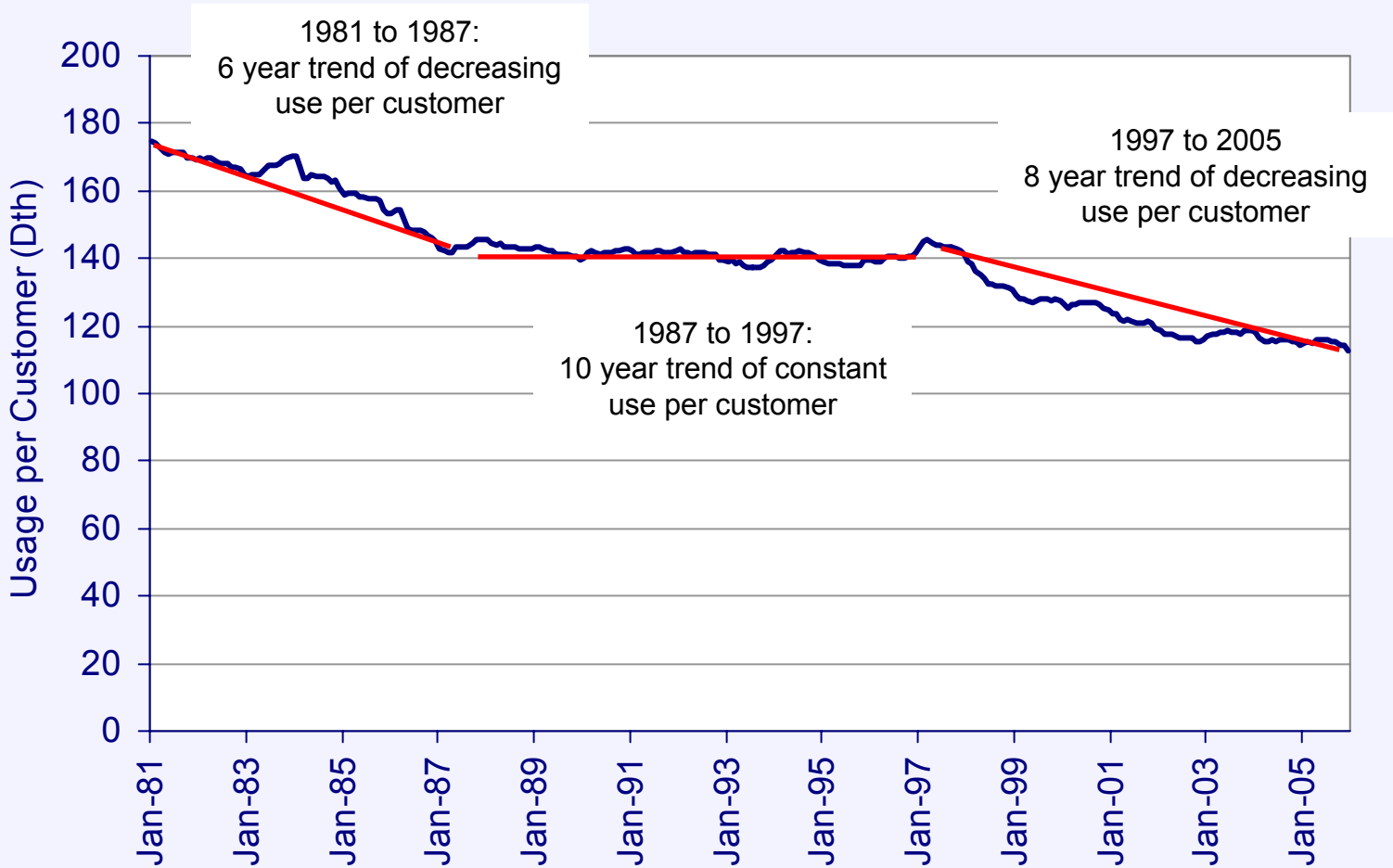
Incremental Impact of DSM Implementation on Shareholders

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.11

		Impact on Shareholders After Taxes		Incremental Net Impact		
	GS1 Revenue Reduction	DSM Sales Reduction of 1 Percent	Customer Growth	Income Impact	Stockholders Equity	Impact on ROE
Base Year	$ 2.43				$ 325,986,094	
2006-2007	$ (2,159,364)	$ (1,337,646)	$ 4,255,974	$ 2,918,328	$ 352,276,008	0.83%
2007-2008	$ (4,318,727)	$ (2,675,292)	$ 4,255,974	$ 1,580,682	$ 377,275,360	0.42%
2008-2009	$ (6,478,091)	$ (4,012,938)	$ 3,745,257	$ (267,680)	$ 397,609,541	-0.07%
Total	**$ (12,956,182)**	**$ (8,025,876)**	**$ 12,257,206**	**$ 4,231,331**		**1.18%**

Utah GS-1 Temperature-Adjusted Use Per Customer

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.12



Statistical Significance of Changes in Use per Customer and Revenues per Customer

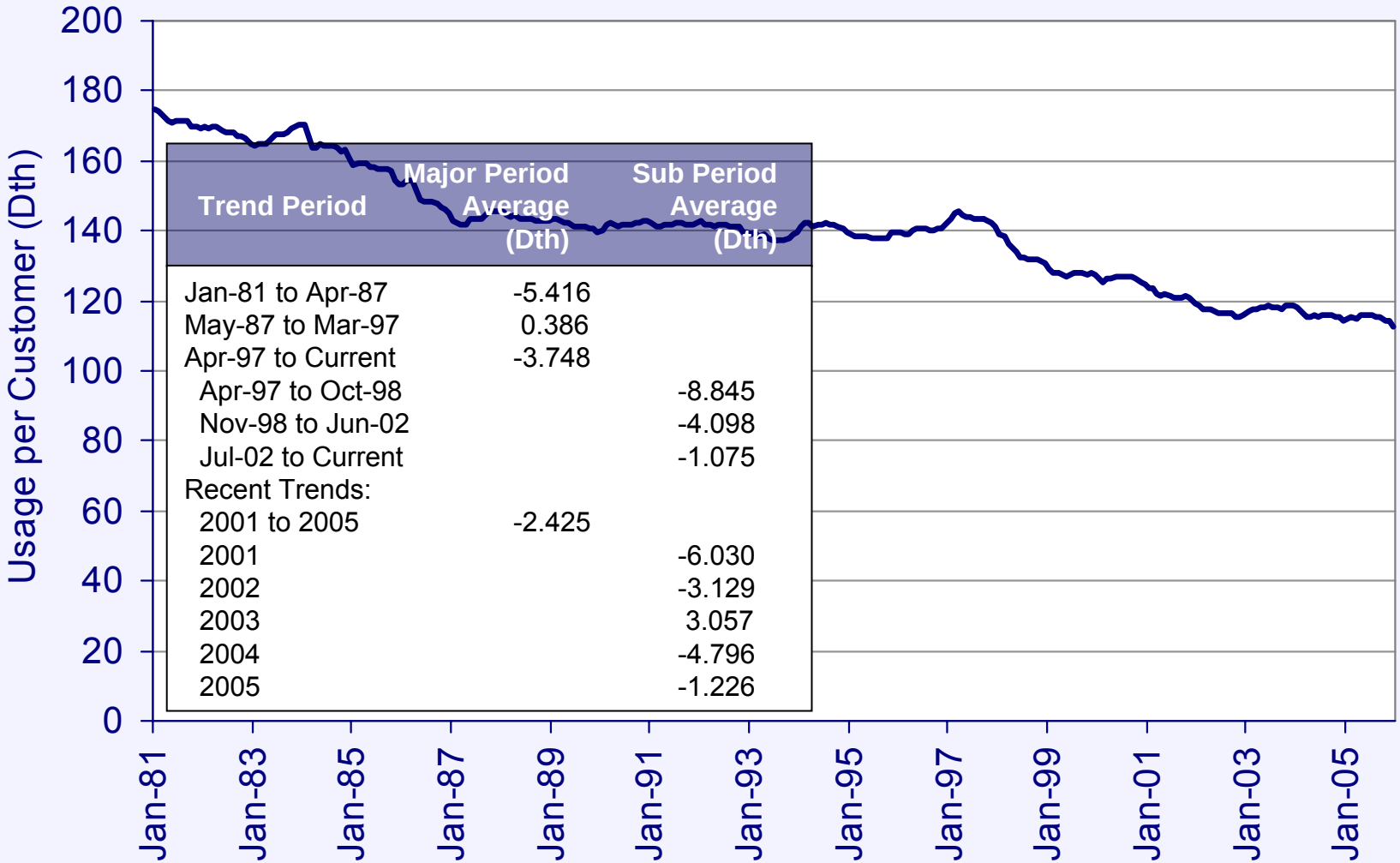
Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.13

	Average Number of Customers GS1	GS1 Usage per Customer (Dth/Cust)	GS1 Usage (Dth)		GS1 Revenue Per Customer
2001	693,316	118.970	82,483,943	$	270.50
2002	711,636	115.841	82,436,911	$	266.47
2003	730,777	118.899	86,888,508	$	283.84
2004	753,953	114.103	86,027,940	$	281.00
2005	785,746	112.876	88,692,051	$	274.82
Sample Mean		**116.138**		**$**	**275.32**
Standard Deviation		**2.7620**		**$**	**7.19**
t-test (2005 vs. 5-year average)		**-1.1809**			**-0.0707**

If "t-test" value is less than -2.776, then there is no statistically significant difference.

Utah GS-1 Temperature-Adjusted Use Per Customer with Major Period Trends

Utah Committee of Consumer Services
Witness: David Dismukes
Docket No. 05-057-T01
Supplemental Rebuttal Exhibit CCS-2.14



Trend Period	Major Period Average (Dth)	Sub Period Average (Dth)
Jan-81 to Apr-87	-5.416	
May-87 to Mar-97	0.386	
Apr-97 to Current	-3.748	
Apr-97 to Oct-98		-8.845
Nov-98 to Jun-02		-4.098
Jul-02 to Current		-1.075
Recent Trends:		
2001 to 2005	-2.425	
2001		-6.030
2002		-3.129
2003		3.057
2004		-4.796
2005		-1.226